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**MEASURES TO IMPROVE HUMANITARIAN SUPPLY CHAIN AND LOGISTICS
OPERATIONS FOR BENEFICIARY AGENCIES**

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MEASURES TO IMPROVE HUMANITARIAN SUPPLY CHAIN AND LOGISTICS OPERATIONS FOR BENEFICIARY AGENCIES

Summary

The objective of this paper is to examine the management of the supply chain and logistics operations in the context of sudden on-set natural disasters for humanitarian beneficiary organisations. Although there has been extensive work on commercial supply chains and interrelated activities from academic and practitioner literature, the field of humanitarian supply chain management is an emerging field of research.

Therefore this paper contributes to literature on humanitarian supply chain management which is a unique and emerging field. The study seeks to identify the barriers to implementation of a successful humanitarian supply chain and logistics operations, its critical success factors and performance measurement.

There is a recognised gap between research and practice in humanitarian supply chain management. By adopting a qualitative approach, the real life experiences of these organisations will be understood. The study will contribute to the existing literature by identifying challenges these organisations face and providing a framework to improve its sustainability.

Word Count: 1974

Background

According to the International Federation of Red Cross and Red Crescent societies (IFRCRC) incidents such as the Indonesia tsunami in 2004, hurricane Katrina of America in 2005, and the floods of river Kosi India in 2008, provide examples of well documented sudden on-set natural disasters (Schmale, 2014). Data from the Centre for Research on the Epidemiology of Disasters (CRED), reports that during 2013 a total of 337 worldwide incidents of sudden on-set natural disasters such as flooding, volcanic eruptions, storms and earthquakes occurred (Guha-Sapir et al., 2015). Unfortunately these incidents are increasing; particularly in Asia where in 2014 over 80 per cent of globally affected people were from Asia (Hamza, 2015). A number of issues affect the forecasted increase and impact of incidents including poor infrastructure, environmental degradation and increasing populations (Thomas and Kopczak, 2005; Tatham and Houghton, 2011). In terms of geographical impact, research has shown that less developed communities are often the most affected by disasters due to a number of social, political, cultural and economic factors (Perry, 2007), with over, 90 per cent of all major disasters occurring in developing countries (Moan et al., 2009). Within the overarching area of supply chain management what is undisputed, and forms the authors inspiration for this paper, is a universal understanding that humanitarian logistics is crucially lifesaving (Chandes and Pache, 2010; Natarajarathinam et al., 2009; Day et al., 2012). With this in mind, research on humanitarian supply chain and logistics operations is pertinent, and has the potential to add to the body of knowledge within this high impact environment.

Research Objective

The overarching objective of the paper is to examine the logistics activities of humanitarian supply chain and logistics operations in the response phase to natural sudden on-set disasters. Here, a recognised gap between research and practice is critically highlighted by scholars (Allen et al., 2013; Kovacs and Spens, 2011; Natarajarathinam et al., 2009; Overstreet et al., 2009). Where, Kovacs and Spens (2011) contest that "... time is a big gap and there doesn't seem to be a strong dialogue between the [humanitarian organisations] sector and academia about things that could make a real difference..." (Kovacs and Spens, 2011:41). Notably, Tomansini and Van Wassenhove (2009), suggest that commercial supply chain management is focused on economic objectives, and is therefore centred on profit orientation. Typically the emphasis is on the management of activities that result in a betterment of factors, such as quality, cost and customer retention to contribute to the profit aims of the firm. Whilst these factors are significant performance related factors, Natarajarathinam et al., (2009) argues that humanitarian supply chain and logistics management is unique, as it is focussed by the provision of aid to beneficiaries who are often in a disastrous life threatening situation. Whilst commercial supply chain management, and its interrelated activities has gained much attention from the academic and practitioner literature, the field of humanitarian supply chain and logistics management is by contrast an emerging (Allen et al., 2013) and unique (Overstreet et al., 2009) field of research.

Defining Humanitarian Logistics

A plethora of definitions of humanitarian logistics have emanated from academics. Humanitarian logistics has been defined as "...the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as

related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people” (Thomas and Kopczak 2005:2). Van Wassenhove (2006:476) states that it is “...the processes and systems involved in mobilizing people, resources, skills and knowledge to help vulnerable people affected by disaster” Indeed, the objective of the humanitarian supply chain for which logistics is such an important element, is to rapidly provide relief to areas affected by large-scale emergencies, so as to minimise human suffering and death (Balcik and Beamon 2008).

Humanitarian logistics has been viewed from different lenses by scholars (Kovacs and Spens, 2007; Pettit and Beresford, 2005; Van Wassenhove, 2006). Where, Kovacs and Spens (2007) argue that there are two separate streams in humanitarian logistics; continuous aid work and disaster relief, and that while they share a common aim of helping people in times of disaster, each require different logistics operations. These disasters are categorised depending on their type: natural and man-made and by their length: slow-onset and sudden-onset (Van Wassenhove, 2006). During a disaster incident [see figure 1] there are essentially three main phases in disaster relief; namely, preparation, immediate response and reconstruction (Kovacs and Spens, 2007). Preparation involves the pre-disaster activities that aim to improve the speed and effectiveness of the response once a disaster occurs. The immediate response phase includes all the activities in the immediate aftermath of the disaster such as delivering supplies to the beneficiaries. Finally, the reconstruction phase involves the activities necessary to restore the country's previous levels of functionality (Pettit and Beresford, 2005).

According to Thomas (2003), the activities of humanitarian logistics “...serve as a bridge between disaster preparedness and response, between procurement and distribution, and between headquarters and the field...” (p.3). It plays a critical role in humanitarian relief, as effective and efficient supply chain management is essential for delivering the right assistance to the right people (Kovacs and Spens, 2011). Moreover, total costs of up to 80% of a disaster incident can be attributed to the role of logistics (Van Wassenhove, 2006). Consequently, more efficient logistics can reach more beneficiaries as more money can be used to buy aid (Kumar et al., 2009). However, despite these observations, its strategic importance is critically rarely recognised by humanitarian organisations, where logistics is often viewed as a support activity (Balcik and Beamon, 2008; Beamon and Kotleba 2006; Blecken, 2010).

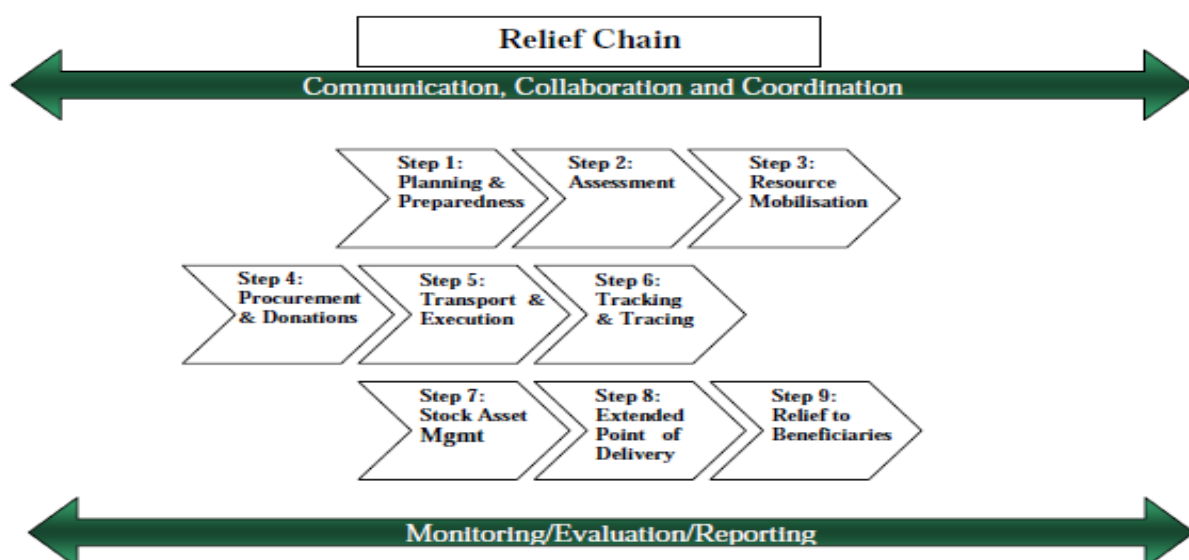


Figure 1: The Relief Chain Adapted from (Van Wassenhove et al., 2010)

The unique challenges in humanitarian supply chain and logistics operations

There are distinct parallels between humanitarian and with-profit commercial supply chain and logistics operations. Pettit and Beresford (2009) suggest that the basic activities are very similar, although employed in different contexts. Van Wassenhove (2006) furthers this idea by critically suggesting that humanitarian organisations are about 15 years behind commercial organisations in terms of supply chain efficiency, for which they could benefit from cross sector knowledge transfer practices. However, he also highlights the significance of the different context in which humanitarian organisations operate. These different contexts may inhibit the direct implementation of the traditional mechanisms and processes from commercial supply chains (Baldini et al., 2011). Therefore, careful consideration of the unique operating environment of humanitarian organisations would be required before any commercial mechanisms or processes could be applied to this sector. These unique operating conditions include; uncertainty for which the environments in which humanitarian organisations operate are highly volatile (Balcik and Beamon, 2008). The uncertainty and difficulties to predict natural on-set disaster incidents, therefore limits the capability for organisations to carry out robust planning and preparation. Furthermore, when a natural on-set disaster occurs, there is a sudden demand for large quantities of supplies required within a very short period of time (Balcik and Beamon, 2008). Demand information such as the timing, location, type and size of supplies is very difficult to obtain (Balcik and Beamon, 2008; Van Wassenhove, 2006). There are further uncertainties about the amount of funding that will be received from donors, and the number and type of organisations that will be operating in the relief effort.

Other factors such as limited available skills and training (Thomas and Mizushima, 2005), poor infrastructure (Pettit and Beresford, 2005), a lack of dedicated directed resources (Kaatrud et al., 2003), and poor integration of communication and systems across aid agencies in the relief chain (Hellingrath and Widera, 2011), makes the humanitarian supply chain and logistics operations arena unique and challenging in comparison to with-profit commercial supply chain and logistics operations.

Coordination mechanisms in humanitarian logistics are not yet as developed as those present in the with-profit commercial sector (Balcik et al., 2010). Coordination mechanisms such as collaborative procurement and third party warehousing is paramount in this sector. A suggested improvement is described by Moan et al. (2009), who argue that collaborations with private companies can lead to improved cost effectiveness, innovations and enhanced capacities. With this in mind the study seeks to develop a framework model for cross-sector collaborations based on financial, capability and multi sector entanglement perspectives.

Research Method

In line with major findings of the literature review, the research aims to explore the challenges of sustainable humanitarian supply chain and logistics operations for humanitarian beneficiary agencies. The study is exploratory and aims to examine the strategic management of humanitarian beneficiary organisations in order to improve the competitive sustainability of their supply chain and logistics operations. As a result, a qualitative method which allows for in-depth understanding of the meanings these unique organisations make of their world will be better suited for the study.

Following this supposition, semi structured interviews is proposed to investigate the concept of humanitarian supply chain strategy and operations in international beneficiary organisations.

Such an approach is suitable when patterns in the data are to be examined (Taylor and Bogdan, 1998; Sandwell, 2011) especially in domains which have not been previously explored in detail and require rich contextual evidence (Howorth et al., 2004). In this study, a purposive sampling strategy is to be used to select the humanitarian organisations for the research. This is the most appropriate because it enables the researcher to select the most effectual sample to meet the intent of the study (Marshall, 1996). Humanitarian organisations such as British Red Cross, Overseas Development Institute and Relief International will serve as the basis for the study. Face to face interviews with the key decision makers in these organisations will be performed. The literature review as well as the research objectives and questions will guide the development of the interview protocol. Data obtained from the interview will be analysed thematically using the software package NVivo. Finally, a framework model that identifies the barriers of the implementation of a successful humanitarian supply chain strategy, its critical success factors and performance measurement will be proposed.

Contribution to Knowledge

The study seeks to contribute to knowledge in the following ways;

- The study will provide a framework model for humanitarian organisations to improve the competitive sustainability of humanitarian supply chain operations strategy.
- The study will contribute to the existing literature on humanitarian supply chain and operations by identifying challenges these organisations face in this context thereby adding to a list established by previous researchers (Balcik and Beamon 2008; Van Wassenhove 2006).

Plan for the development of the paper

Prior to the presentation at the conference, the key decision makers to serve as respondents for the study would have been identified and contacted. Access is very important and would have been negotiated. This will help in providing empirical data that will serve as platform for carrying out the study and subsequently writing the full paper.

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